

On Cussing in Church: In Defense of *What's Within*?

Response to Antony and Matthews

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NOTE (2015): This paper is a response to critiques by Louise Antony and Bob Matthews at an Author Meets Critics session on my *What's Within* at the APA Eastern Division Meeting, Boston, Ma., December 28th, 1999.

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In his testimony in *McLean v. Arkansas Board of Education*, 529 F.Supp.1255 (E.D.Ark. 1982), Michael Ruse cites the lack of integrity and closed-mindedness of Creationists – in addition to Creationism's untestability, absence of predictive power and tendency to appeal to miracles by way of 'explanation' of natural phenomena – as reasons to deny Creationism scientific status. While one may quibble with Ruse's contention that the character of its advocates bears on Creationism's claim to be a science, one can at least agree with him that it's pointless to attempt to shake Creationists from their beliefs by the application of reasoned argument and evidence. Arguing with Creationists, as Ruse's testimony emphasizes, is like arguing with the business end of a

cricket bat: however many bits of empirical evidence or carefully-fashioned argument you lob at them, they whack them undigested right back at you, only harder and a lot nastier.

Arguing with nativists is sometimes like that too.

1. Speaking in Tongues : Response to Antony

1.1 In the Beginning

When I first received Antony's comments, I thought that there must have been a mistake: the book she was deriding was not the one I wrote. However, I soon realized that she did intend to be discussing my book, and concluded that either she hadn't read it, or she couldn't understand it. I take this latter possibility as a serious indictment of the book. While its arguments are, I admit, complex, I strove throughout to write clearly enough for them to be broadly accessible. If even a specialist like Antony couldn't follow me, I must have failed signally in this aim. Thus, I am grateful to have this opportunity to correct Antony's unwitting representations of my positions, lest others encounter similar difficulties of comprehension.

As Antony correctly notes, the first three chapters of *What's Within?* are concerned with the historical debate over innate ideas. In particular, they are concerned to answer the question: what did historical nativists *mean* when they claimed that such and such a mental item is innate? Rather than attempting further analysis of nativists' (extraordinarily unhelpful) metaphors, I decided instead to focus on their arguments. I reasoned that what those arguments entail must be what nativists are committed to.

To my initial surprise, I found two quite different kinds of nativist argument in the historical literature. Moreover, I found, these arguments were used by their proponents to support innateness hypotheses of very different scopes. Arguments from the poverty of the stimulus (hereafter, 'POSAs') invariably granted that some ideas are *not* innate, and were used to show only that certain other ideas – such as GOD, CHILLIAGON, or NECESSITY – *are* innate. In subsequently addressing the question of what talk of innate ideas means in this context, I argued that when an innateness hypothesis is supported by a POSA, it amounts to the claim that we use task-specific mental faculties to acquire the ideas in question (§§2.4, 2.6).¹

Whereas the conclusions of POSAs apply only to specific ideas (or kinds of ideas), what I called Impossibility Arguments (hereafter, 'IAs') apply to *all* ideas. IAs claim that since there can be no account of how ideas could be acquired from experience, all ideas must be innate. For Descartes, this is because giving such an account would require understanding how minds and bodies causally interact, and this is something we can't do (§3.2). For Leibniz, it's because the soul has 'no windows' through which external things could causally affect it (§3.1). All our ideas must be innate – meaning in *this* context (I argued, §§3.3-3.5), that we can expect no causal-scientific theory as to how they are acquired. Nativism about ideas based on an IA, then, amounts to a kind of non-naturalism about the acquisition process.

In 'Empty Heads' (pp.7ff.), Antony contends that there is yet another form of argument to be found in the early modern literature. What she calls 'Transcendental' arguments claim that certain learning mechanisms must be innate because they're required for learning. And what 'innate' means in this further context, Antony urges, is

¹ Unless otherwise noted, references to section numbers are to Cowie 1999.

just what we always assumed it meant: inborn, not got from experience, due to ‘nature’ rather than ‘nurture.’

Antony is quite right about this. There is this third *kind* of argument in the literature, and it does lead to what might be called ‘minimal nativism’ – the claim that (at least some of) the equipment we use to learn things with must be inborn. Antony is also correct in stating that *What’s Within?* does not deal (except in passing -- §§1.1, 1.5, 2.1) with this ‘Transcendental’ form of argument. However, she is not correct in claiming that this omission undermines my identification of IAs and their non-naturalist conclusions as a further strand in nativist theorizing. (Antony does not, after all, explain how the many passages I discuss in connection with IAs are to be interpreted on her model -- §§3.3, 3.1, 3.4). Nor is Antony correct in stating that my failure to discuss ‘Transcendental’ arguments undermines my later discussion of Fodor’s nativism (chs.4-6). Or so I will attempt to show in this response.

First off, the reason that *What’s Within* does not pay much attention to the ‘Transcendental’ argument for innateness (hereafter, ‘TA’) is that this is a form of argument that is *common* to both nativists and empiricists – as Antony’s discussion of Quine (p.8), Hume (p.9-10) and Vygotsky (p.11) attests – and *What’s Within* was concerned to examine those arguments and commitments that *distinguish* nativists from empiricists.² It took the stance: given that *everyone* accepts the TA’s minimalist conclusion that *some* learning mechanism(s) must be inborn, there must be more to being a Nativist (capital N) than that you accept the conclusion of a TA – otherwise, what’s all the fuss about? What more? My answer, as already outlined, was that there are two

² Unless otherwise noted, all page references in §1 of this response are to Antony [this issue].

different things that Nativists have added to the minimal innateness hypothesis entailed by Antony's TA. Some Nativists add a claim about the *nature* of the inborn learning mechanisms. Because they are moved by a variety of POSAs, they claim that (some of) those inborn mechanisms are domain specific. Other Nativists add a metatheoretical claim about the nature of the explanatory enterprise in which both they (in their POSA moods) and empiricists are involved. Because they are impressed by IAs, they add to Antony's minimalist nativism the further claim that there can be no satisfactory scientific explanation of how stuff that's *not* inborn (if such there be) could get into our minds.

Thus, Antony's claim that TAs are just another form of IA is false. Whereas TAs indicate merely that *some* stuff must be innate, the hallmark of an IA is its radically nativist conclusion: *everything* is innate. And although TAs do assert the impossibility of something (viz., learning, from scratch, how to learn), they simply do not speak to the questions IAs address, namely, is it possible (given our current state of knowledge) that ideas could be *other than* inborn?

That a subtle and careful reader like Antony could make an error like this indicates that it was a mistake not to discuss TAs in more detail in *What's Within* and distinguish them more explicitly from IAs. By way of further clarifying this distinction, then, I will attempt to show in the next section how this error undermines Antony's interpretation of Fodor's nativism.

1.2. Fodor's Egg: Transcendental in Parts

Antony and I agree that Fodor is not offering a POSA in defense of his nativism. However, we disagree as to what kind of argument he is offering instead. I claim (in

Chapters 4-6) that Fodor is offering a species of IA. His argument is that since concept learning is (in most cases) impossible, almost all our concepts are innate.³ What this claim means, I argued in §§4.6, 5.4-5.6, is that there can be no psychological explanation – and perhaps no scientific explanation at all – of how concepts are acquired.

This reading, Antony urges, “contains...two mistakes and an irony” (16). The first mistake is that “Cowie misses Fodor’s actual argument for the claim that almost all our concepts are innate: in fact, it is a transcendental argument (in [Antony’s] sense)” (16). The second mistake follows from the first: because I misunderstand Fodor’s ‘actual argument,’ I get bogged down in irrelevant discussions of how concepts are structured (prototypes or stereotypes vs. definitions). And the irony is that all of this is beside the point, for “on Cowie’s own view, the issue of concept *structure* is a red herring.” (16)

On the contrary, however, it is Antony who misses both Fodor’s ‘actual argument’ for his radical concept nativism and my arguments against it. First, although she is correct to point out that Fodor does offer what might be called a ‘transcendental argument’ for the existence of a language of thought, this is not a TA in Antony’s sense for it does not entail any claim about innateness. Second, although Antony is correct to point out too that a different transcendental argument forms a part of Fodor’s case for nativism, this argument only supports the minimal view that *some* concepts are innate. It does not, that’s to say, support the radical nativism that Fodor is (in)famous for promoting. Third, in denying that the issue of conceptual structure is relevant to Fodor’s case for his radical nativism, it is Antony who is not on point. For it is Fodor’s view about conceptual structure – his ‘conceptual atomism,’ as Antony terms it – that gets him *from* the minimal

³ Although phrasal concepts, such as THE FLYING DOCTOR, are learnable on Fodor’s view, most lexical concepts (\approx concepts expressed in English by a single word) are not learnable, hence are innate. (See Fodor 1981.) This subtlety does not matter for present purposes.

nativism that is supported by his TA *to* the radical nativism that he ultimately takes up. Finally, and relatedly, the issue of structure is no red herring. As I will show in §1.3 below, the question of whether concepts turn out to have internal structure, and if they do, what kinds, bears essentially on the issue that I take to be at the bottom of Fodor's nativism, namely, the issue of whether a psychological explanation of concept acquisition is attainable.

Antony focuses first (pp. 18-19) on Fodor's argument, in his (1975), for the claim that our ability to learn a language requires that we possess an internal medium of representation that is at least extensionally equivalent to any natural language. The argument for this 'language of thought' is as follows: Since all learning involves computation (i.e., the rule-governed manipulations of representations), learning a natural language involves computation. Hence, learning a natural language requires that we possess some means of representation *other than* the natural language being learned. Further, since learning the meanings of natural language predicates is a matter of computing the correct hypotheses about their meanings (i.e., true hypotheses to the effect that the predicate applies to x if and only if x is F), said representational system must be able to express the extension of any natural language predicate. Now, Fodor contends, if a representational system is capable of doing *all that*, then it's tantamount to being a language itself. So, as Antony puts it, closely paraphrasing Fodor: "you can't learn a language unless you have one." (p.19)

We can agree with Antony that this is a transcendental argument in (more or less) the Kantian sense: Fodor is claiming that the *mere possibility* of language learning shows that there's a language of thought (hereafter, 'LOT'). Note, however, that this is *not* a

Transcendental argument in *Antony's* sense – it's not a TA – because it doesn't bear on the issue of nativism in any way whatsoever. It tells us that there must be a LOT, but it doesn't tell us whether the LOT is inborn or acquired; nor (supposing the LOT is acquired) whether it's learned or got in some other way; nor (if it's learned) whether it's learned *via* a special-purpose faculty; nor (if it's got in some other way) whether that 'other way' will prove to be explicable by natural science. Thus, while both Fodor in his (1975) and Antony claim that this argument leads to nativism, it doesn't. Rather, and as Antony herself seems later to recognize, the only thing this argument has to do with innateness is that it is similar to an argument about concept acquisition that *does* bear on that issue. Or, as she puts it, "[t]his is important, because the same argument goes through, *mutatis mutandis*, for the acquisition of *concepts*." (p.19)

So, having gotten the real red herring of language acquisition out of the way, let us turn to Fodor's argument for nativism. Antony says it goes like this:

[I]f the acquisition of concepts is a process of learning, then there must be a medium of representation via which this learning takes place. But this cannot go on forever...there has to be a basement level of representation, and concepts *are*, virtually by stipulation, it. In short, *concepts* can't be learned because concepts are what make learning possible. (p.20)

But if this is Fodor's argument for his radically nativist claim that 'most of our concepts are innate,' then it is a very bad one. Radical nativism simply does not follow from the fact that if concept learning is to be possible, 'there has to be a basement level of

representation.’ For as Fodor points out at the beginning of his (1981) and as Antony, apparently, agrees, not all concepts have to be relegated to the basement: “there’s absolutely no barrier, as far as this argument goes, to there being a very small primitive basis, all other concepts being composites of the primitive elements.” (p.20) Thus, all that follows from this argument is the minimally nativist claim that *not all* concepts could be learned; *some* of them must be inborn.

Now, I am happy to agree with Antony that this argument counts as a TA in her sense, for the basic point of the argument is, as she puts it, that “it *takes* a concept to *learn* a concept.” (p. 20) She’s right, too, in her contention that considerations to do with conceptual structure play absolutely no role in this argument. However Antony is dead wrong to suggest that any of this shows that the issue of conceptual structure is irrelevant to Fodor’s nativism. For the minimalist nativism that is supported by the TA just outlined *is not Fodor’s nativism!* Fodor’s nativism goes *way* beyond this. He does not stop at the boring and innocuous claim that some concepts are innate. Instead, he goes further and makes the radically nativist claim that *most of our concepts are innate*. That’s what makes Fodor’s nativism so interesting.

So there’s more to Fodor’s nativism than a claim that some concepts must be innate. Predictably, then, there’s also more to Fodor’s ‘actual argument’ for his nativism than the TA just discussed. Taking Antony’s transcendental point more or less for granted, Fodor (1981) continues the argument of his (1975) as follows.⁴ First, assume that learning a concept is analogous to learning a predicate in natural language: it’s a matter of computing the correct hypothesis about what it means (or what its content is). Then, if you’re going to learn a concept, you need to be able to use the other concepts you already

⁴ See Cowie 1999, §4.1; see also Fodor 1998’s discussion of his ‘Standard Argument’ for innateness.

have in order to formulate that hypothesis. So, the only concepts that *could* be learned are ones whose meanings you can represent using other concepts.

It's at this point, notice, that the issue of conceptual structure rears its ugly mug. For Fodor calls these kinds of concepts – the ones whose meanings are represented using other concepts -- 'internally structured' concepts. Thus, another way to put the point made in the last paragraph is by saying, as Fodor does repeatedly in his (1981) and (1998), that only internally-structured concepts could be learned. Thus, his question – and mine – becomes the following: *are* concepts internally structured?

Fodor argues that there are really only two kinds of internal structure that concepts could have: definitional structure (in which case getting the right hypothesis about a concept's meaning is a matter of figuring out its definition) or non-definitional structure (in which case getting the right hypothesis about a concept's meaning is a matter of representing an appropriate stereotype or prototype for that concept). However, he continues, most concepts don't have definitions, and there are independent reasons for denying that prototypes or stereotypes could function as concepts' meanings. So, he concludes, most concepts aren't internally structured. And so, he concludes, most concepts are unlearned. And *so*, he concludes, most concepts are innate.⁵

Note two things about this argument. First, it is not a transcendental argument – neither in Antony's sense nor anyone else's. This argument doesn't make the 'transcendental' claim that most concepts must be innate in order for concept learning to be possible. Instead, it makes a different claim, viz., that most concepts must be innate *because learning them is not possible at all*. So although an Antony-style TA is, as we've seen, a step on Fodor's path to his radical nativism, his 'actual' argument for that

⁵ See Cowie 1999, §4.2 for more on these arguments.

view is not a transcendental argument. Instead, as I claimed in *What's Within*, it's an Impossibility argument (IA) claiming that most concepts cannot be learned, so most concepts are innate.

Note, secondly, that the issue of conceptual structure is very much *not* beside the points Fodor is making here. His claims about conceptual structure (or rather, the lack thereof) are *absolutely necessary* to get him from the TA-based platitude that *some* concepts are innate to the radically Fodorean claim that *most* concepts are innate. *That* is why I spend so much time discussing concepts' structure in *What's Within*, and *this* is where my counterarguments to Fodor's nativism take hold.

Contrary to Antony's claim that "Cowie doesn't in fact *have* an objection to Fodor's actual argument, nor to his actual critique of empiricism," (p.17) it is precisely on the issue of conceptual structure that my objections turn. For it is at this point that the mild-mannered, TA-based nativism that everyone accepts transmogrifies into its dreadful Fodorean alter ego. So while Antony is correct to point out that I do not object to Fodor's TA – I accept the idea that for concept learning to be possible at all, there must be some innate concepts – she is overly hasty in concluding from this that I have no counterargument to Fodor's nativism to offer.

1.3 Fighting the Good Fight

As we have seen, Fodor's Impossibility argument for his radical nativism depends on his conceptual atomism, his claim that concepts are unstructured. However this claim, I contend, is false.

First, while Fodor is right to think that most concepts don't have definitional (or, as it's often called, 'Classical') structure, his argument against the claim that they have some sort of *non*-Classical structure (e.g., prototype or stereotype structure) is fallacious (§6.4). Fodor's objection to non-Classical structures for concepts is that although these structures are supposed to function as concepts' meanings or contents, they can't. For, he argues, conceptual contents are what your compositional semantics combines when it's specifying contents for complex thoughts. But since prototypes and the like won't combine in the right ways to provide a semantics for complex thoughts, they can't be conceptual contents. What lies at the heart of this objection, I urge, is the fact that prototypes and stereotypes don't suffice to fix concepts' reference: my concept COW, after all, refers to *cows*, not to things that happen to resemble my cow stereotype or prototype. But if prototypes (etc.) don't fix reference, they can't be the things that complexes inherit from their constituents. For what BROWN COW needs to inherit from its constituents is their references – *brownness* and *cowhood*. Inheriting merely the COW prototype and the BROWN stereotype, therefore, Just Won't Do.

I respond, however, that on a Fodor-style – or indeed any naturalistic – theory of reference, prototypes and stereotypes don't *have* to fix reference – at least not all by themselves (§6.4). For also contributing to the fixation of reference, as Kripke and Putnam taught us, is how concepts are hooked up to the world. My concept COW refers to cows not just in virtue of the fact that it's associated in my head with a representation of a prototypical cow, but (partly, at least) because it covaries with (or 'resonates' with or is caused in the right way by) *cows*. The point being that if, according to a naturalistic semantics, what is in the head isn't *supposed* to suffice to fix reference, then it's no

objection to non-Classical accounts of concepts' structure (/content) that on these accounts, what is in the head *doesn't* suffice to fix reference. For all this argument shows, it's an open question whether (some? most?) concepts have non-Classical structures. Hence for all Fodor has shown, it's an open question whether (some? most?) concepts can be learned.

My objections to Fodor's nativism do not end here, however. I argue, secondly, that there are in addition positive reasons to think that many concepts do have such non-Classical structures – and hence to think they are learnable. First, and even Fodor acknowledges this, there's a bunch of psychological evidence – which I won't rehearse here -- suggesting that prototypes and the like loom large in our psychological economies. Secondly, and more importantly, there's also a theoretical reason to think that concepts have internal structures even (indeed especially) on Fodor's view. On that view, very crudely, you possess the concept of F-ness when your tokenings of "F" refer to Fs; and your tokenings of "F" refer to Fs if they nomically covary with (or 'resonate to') instantiated F-ness. In §§6.4 and 6.5, I argue, first, that we need to postulate structures of *some* kind to serve as mechanisms to mediate the head-world links that function to fix reference: there has to be something in your head *in virtue of which* your "F" tokens covary with Fs. Then I argue, secondly, that in many cases these mechanisms are going to be intentional: unless you're born such that you resonate 'brute-causally' with F-ness, such resonations are going to be mediated by representations. These representations could be of many kinds. Definitions of F-ness might do the trick, but they're kind of thin on the ground. Fortunately, so too might prototypes or stereotypes: any of these kinds of structures could constrain you such that you (mostly, under ideal

conditions) token “F” just when there are Fs around. Finally, I argue, if these kinds of mediating representations exist, then it’s grossly implausible to think that all of them are inborn. But fortunately, as my discussion of reference fixing showed, there’s no *reason* – at least to be found in Fodor’s writings – to think this. Fodor shows that the mediating representations are in most cases not definitions, but his reasons for thinking that they’re not something like prototypes or stereotypes are inadequate. There is good reason to think that concepts have internal (prototype/stereotype) structure. So some concepts, thank heaven, are learnable after all.⁶

2. Chomskyan Science: Response to Matthews

Matthews makes a number of very just criticisms of *What’s Within?* First, the two sentences of political moralizing in the Preface which he objects to (p.1) *is* rather superfluous.⁷ Second, in discussing the ‘Core’ commitments of Chomksyan nativism in §7.1, I *did* mean something more like his (I’) than my (I), as the surrounding discussion I hope makes clear. Finally, I *was* unaware of the formal learning theoretic literature on parameter setting that he refers to (p.14, n.2), so I hereby withdraw the remark he quotes (p.14) about parameter setting’s being less amenable to formal investigation than hypothesis-testing. (I don’t think, though, that this affects the substance of my discussion of parameter setting, the point of which was to defend the claim that whatever its amenability to formalization, it is not an accurate model of actual language learners.) I am grateful to Matthews for drawing my attention to these shortcomings.

⁶ See Prinz (in press) for a picture of how the learning theory merely gestured at in *What’s Within* might actually work.

⁷ And is attributable, I fear, to the exigencies of going up for tenure in a Division of Humanities and Social Sciences rather than a Department of Philosophy!

I am, however, less moved by other of Matthews' criticisms, the three most important of which I will deal with here. One major worry is inexplicit, but is clear from the tone of Matthews' paper. This concerns the overall significance of my discussion.

Throughout 'Cowie's Anti-nativism' are rumblings to the effect that although I stir up a lot of "dust" (p.10) about a variety of issues I end up embracing the rather anticlimactic conclusion that nativism is probably true after all. So much Drang, he seems to be saying, for so little Sturm. Secondly, he complains (and this is explicit) that I focus too much on Chomskyans' poverty of the stimulus arguments (POSAs) during the course of this dust-raising, and thereby miss the "multistep complexity" (p. 6) of the Chomskyan argument for nativism. Finally, he says, although I purport to be showing that "empirical arguments advanced in support of linguistic nativism are inconclusive, if not unsound," all I argue is a "much weaker claim, namely, that nativists have not shown empiricism not to be empirically possible" (p.3) I will deal with these points in order.

2.1 Sturm und Drang

Matthews clearly wonders why I bother to examine Chomsky's case for nativism at such length if I end up embracing nativism after all. Two reasons. One is that it seemed to me an appropriate philosophical endeavor, 40 years after Chomsky's nativism first emerged to such fanfare, to review its successes and failures. Chomskyan nativism has been dominant in cognitive science for longer (just!) than I've been alive. It's acquired the status, almost, of dogma. (As Matthews himself readily admits: "most cognitive scientists do not think of [it] as a broad theoretical commitment that requires empirical justification" (p. 1)). So part of what motivated me to write *What's Within* was a desire

– surely not all that rare among philosophers – to re-examine the received wisdom to see if it's still as wise as once it seemed.

The other reason that I chose to examine Chomsky's nativism and the nativist alternatives to it is that it seemed to me to be worthwhile – even if one's a dyed-in-the-wool nativist – to find out how much justification there is for accepting the *specifically Chomskyan* picture of the inborn language faculty. When I discovered that while there may be reason to be a nativist about language learning, there's no reason to accept the language faculty *as described by Chomskyans*, that seemed to me to be something that was worth knowing. Chomsky's is not the only way of being a nativist about language, and the issue here, after all, is not who 'wins' the language learning game; but rather to understand *how language learning actually occurs*. That is, if your goal as a cognitive scientist is to understand how kids learn language, then it is important news if (as I claim) there's no reason to believe that UG plays a causal role in constraining the language acquisition mechanism. For then you will want to start looking at very different kinds of theories than most people have been pursuing over the last 30-odd years.

Matthews also implicitly asks why I rabbit on so much about *empiricism*, if I end up embracing *nativism*? One motivation is quite narrowly analytical. You might concede that "[e]mpiricism ceased to exist as a credible scientific research program with the demise of behaviorist learning theory" (Matthews, p.1) if this is construed as a straightforwardly historical claim. Yet you can nonetheless raise the question whether behaviorism's demise somehow *compels* the abandonment of empiricism. It seems to me, as I argued in *What's Within*, that behaviorism's demise does *not* (as a matter of logic) have this kind of heft, and so I wanted to reopen the space of ways to think about

learning (language learning particularly, but other kinds of learning as well). What other possible approaches to learning are there and which of them might profitably be explored?

My discussion of Chomskyan nativism thus begins by distinguishing (§7.1) what I take to be the five ‘core’ Chomskyan commitments. Making the correction to (I) that Matthews suggests, they are:

- (R) **Representationalism:** Language mastery involves representation of a grammar, and learning language involves learning a grammar.
- (B) **Biological Boundedness:** In virtue of the inborn structure of the human mind, there are constraints on the space of thinkable thoughts.
- (DS) **Domain Specificity:** Learning a language requires that the learner's thoughts about language be constrained by principles specific to the linguistic domain.
- (I) **Innateness:** The constraints on learners’ thoughts specified in (DS) are innately encoded.
- (U) **Universal Grammar:** The constraints and principles specified in (DS) as being required for language learning are to be identified with the principles characterised in the Universal Grammar.

While I recognize that (R) and (B) are pretty well universally accepted, and for good reason, I argue that the status of (DS), (I) and (U) is less clear. For although this trio of theses is generally treated in the literature as an indissoluble whole, the individual claims are separable. (U) entails (DS) and (I), to be sure. But the entailments do not go through

in the other direction. Thus, one cannot assume that an argument for, say, (DS) is necessarily an argument for (I) and (U) as well. And thus, it could turn out that some of these claims have different levels of empirical support, in which case, it may not be appropriate to accept Chomskyan nativism *in toto*. Some other approach may be more fruitful.

Excluding behaviorism, which I agree is hopeless, I discuss a total of three possible alternatives to Chomskyan nativism. First, there is what I call **Weak Nativism**, which accepts Chomsky's (DS) and (I), denying only his claim (U) that UG is what constrains the language-learning mechanism. Second, there is what I called **Putnamian empiricism**, which denies (DS) and (U) while accepting (I) – here interpreted just as the claim that the mechanism used for learning language is inborn.^{8,9} Third, there is what I call **Enlightened empiricism**, which accepts (DS) while denying (I) (and, almost certainly (U) as well – see ch.10.)

So much for logical space. Still Matthews' question remains: since I end up accepting a form of nativism, why discuss empiricism further? The reason is that I might conceivably be wrong about the strength of the case for Weak nativism, discussed in Chapter 11. Maybe we should be empiricists after all.¹⁰ If so, then it's worth

⁸ I call this position 'Putnamian empiricism' because it seems to be what Putnam is advocating in his (1971) and it's certainly what Chomsky took him to be advocating. I have my doubts, though, about whether Putnam really meant to be denying in that paper that task-specific knowledge is implicated in theory choice.

⁹ It was in order to accommodate the claims of the Putnamian, I seem to recall, that I used my (I) rather than Matthews' (I') in my formulation of the Core Chomskyan commitments in *What's Within* §7.1. For you can't attribute to the Putnamian a view (I') about the innateness of domain-specific information that he doesn't think plays any role in learning. Thus neither formulation of (I) is exactly right: I will need to think about this some more.

¹⁰ I'm beginning to think that perhaps we should. E.g., the arguments from Creolization (§11.4) and the Dissociability of language (§11.2) are even more controversial than I realized when writing *What's Within*. Myhill (1991), e.g., argues persuasively that the nativist's claim that all creoles conform to UG is simply false. Others have expressed serious doubts about the interpretations of Specific Language Impairment and

distinguishing Enlightened empiricism from both Putnamian empiricism and Behaviorism, for the first is much more tenable than either of the latter two positions. (Note that contrary to Matthews' rather astonishing claim that I was concerned to "see traditional (Putnamian) empiricism returned to its former glory." (p.14), I argue very early on in my discussion – in §8.2 – that Putnamian empiricism is untenable and should not be pursued.¹¹)

Enlightened empiricism, as we've seen, accepts Chomsky's (DS), while denying his (I) and (U). The Enlightened empiricist is an *empiricist* because she holds that the inborn contribution to language learning is domain-neutral: the learning mechanism with which we learn language could be used to learn other things as well. However, she is also *enlightened* because she (unlike the Putnamian) does not deny (DS), the claim that task-specific information about language (other than what is supplied by the current evidence) plays a role in the learning process. This kind of theory has enjoyed something of a renaissance outside of traditional cognitive science – and I'm thinking here of various types of connectionist learning algorithms, various kinds of Bayesian inference mechanisms, Glymour-style causal inference and various cognitive-neuroscientific approaches to modelling development, all of which allow learners to use task-specific information *acquired as a result of the learning processes themselves* to constrain their inference procedures. It thus seems worthwhile to point out that this form of empiricism has not in fact been flattened by the Chomskyan juggernaut. (Even if the existence of Enlightened empiricism as a point in logical space turns out not to be important as far as

William's Syndrome that Pinker (1994) relies on in his 'double dissociation' argument for nativism – e.g., Bellugi et al. (2000).

¹¹ I do, however, object to some of Chomsky's *arguments against* Putnamian empiricism. Maybe this is what misled Matthews into thinking I was defending it.

language is concerned, it may be of interest to those who would turn their attention to other domains where it is less plausible to postulate specially-evolved mental ‘organs’ for specific learning tasks.)

2.2 *The One and the Many*

I turn now to Matthews’ second complaint, namely, that I miss the ‘multistep complexity’ of Chomsky’s argument for nativism. In particular, Matthews contends, my discussion of various poverty of the stimulus arguments in Chapters 8 and 9 mistakenly takes them to be arguments for Chomskyan nativism *tout court* (i.e., for the conjunction of all five of the ‘Core’ Chomskyan theses distinguished in §7.1 and summarized in §2.1 above) . However, he claims, POSAs are not intended by Chomskyans to be arguments for the *conjunction* of the ‘Core’ theses. Instead, they are only intended to speak to one of them, namely (DS), the claim that language learners make use of domain-specific information about language when updating their grammatical hypotheses. Since nativists have other arguments up their sleeves for the remaining Core claims – including “(ii) a second argument...to the effect that this domain specific knowledge (DS) could not itself be learned and hence must be innate (I’), and (iii) an argument to the effect that innate, domain-specific knowledge is properly characterized in terms of UG” (p.6) – my discussion in Chapters 8 and 9 is “hardly damaging to nativism.” (p.6) For all I manage to show there is that – as nativists knew already – POSAs alone are not arguments for nativism.

I have to say that I find Matthews' claims about the intentions of Chomskyan nativists very implausible. For, as I show in §§8.6 and 9.6 of *What's Within*, this is not

what they say. As to Matthews' accusation that I fail to acknowledge the complexity of the Chomskyan case, that is flagrantly untrue, as even the most cursory reading of chapters 7-11 reveals. *What's Within* discusses no fewer than twelve arguments (some distinct, some clearly flagged as being interrelated) for Chomskyan nativism. These are:

1. Chomsky vs. Skinner -- §§7.2-7.3
2. Chomsky's POSA (auxiliary fronting rule) -- §§ 8.2-8.5
3. Crain's POSAs (*is*-contraction, *wanna* contraction) -- §8.6
4. Chomsky vs. Putnam (no *purely* general learning model ever made plausible) -- §8.2
5. Logical Problem of Language Acquisition (no negative evidence) -- §§ 9.1-9.5
6. Iterated APS -- §§10.1, 10.8
7. Linguistics is a branch of psychology (so Chomskyanism true apriori) -- §§10.2, 10.3
8. Chomsky's inference to best explanation (hypothesis-testing and parameter-setting versions, §§10.5-10.7)
9. Existence of linguistic universals -- §11.1
10. Dissociability of language -- §11.2
11. Critical period effects -- §11.3
12. Creolization -- §11.4

This list includes all the arguments that Matthews discusses in his paper, and many more that he doesn't. Arguments (6) and (8) are Matthews' "impossibility of acquisition argument" (pp.7-8) and "argument from parsimony" (pp.6-7) respectively. Arguments

(7) and (8) are arguments for (U) – possibly (though Matthews does not elaborate) those he was meaning to advert to in the passage quoted above.

Clearly, I can't rehearse my discussions of all these arguments here and 'prove' that I actually understood them – it would take a book to do that! Suffice it therefore to assert that while I frequently *disagree* with nativists as to both the validity and the soundness of their arguments, it is a gross misrepresentation of my work to suggest that I have failed to appreciate the complexity or richness of their case. Disagreeing with someone's position is one thing; failing to understand it is another. In making the present criticism Matthews, I fear, has confused the two.

2.3 *The Possible and the Actual*

I turn lastly to Matthews' recurring protest (e.g. pp. 3, 4, 13) that all I do in criticizing the Chomskyan case for nativism is show that nativism *might* not be true, the implication being that since everyone knows that the mere possibility of error is not enough to undermine an empirical theory, my arguments need not be taken very seriously.

If I'm to succeed in showing that the truth of nativism is an "open question" (p.3) in any more than the trivial sense that all empirical theories are fallible, Matthews says, I must "show *either* that nativist arguments are inconclusive, if not unsound, and nativist models of language acquisition are non-explanatory, *or* that there exist equally plausible empiricist models." (p.3) Clearly, since *What's Within* grants explicitly and repeatedly that there is no plausible empiricist theory of language acquisition available, my strategy is that described in Matthews' first disjunct. I contend that the arguments used in favor of Chomskyan nativism are often invalid, sometimes unsound *and* that Chomskyan

nativism does not provide a good explanation of language acquisition. Unfortunately again, I can't rehearse my argument here – that would risk doing an injustice to the Chomksyan case in all its multi-step complexity. So what I will do is follow Matthews' lead and focus on the argument from the poverty of the stimulus, specifically Chomsky's argument from the poverty of the stimulus, discussed in Chapter 8.

What I argue in connection with Chomsky's POSA is, first, that there is no reason to believe that the stimulus to language learning is impoverished in the ways that Chomskyans have said it is; and secondly, that even if it were, all that *that* makes plausible is (DS), the conclusion that when figuring out the rule for polar interrogatives, say, your average 3- or 4-year old must be making use of linguistically-specific information. Chomsky's argument from the poverty of the stimulus, in other words, is both invalid (it doesn't support nativism) and unsound (one of its premisses is, if not false, then grievously undersupported).

We've already seen Matthews' response to the first of these claims: the fact that the argument from the poverty of the stimulus doesn't support nativism is no problem, because it wasn't intended to support nativism. (I must say that this contention might surprise many of the authors whose POSAs I discuss.) I will therefore pass on to Matthews' response to the second of my claims, namely, that not only is there no actual evidence that Chomskyans' assertions about what is in the primary data are true, there's even a *souçon* of evidence that they're false (§§8.2, 8.3, 8.6).

One might expect Matthews to respond to my arguments on this point *either* by supplying us with some relevant evidence or by explaining why empirical evidence is not relevant. But he does not do this. Instead, he merely *asserts* that “the accepted

characterization of primary linguistic data is empirically well supported” (p.8); *ignores* completely the empirical evidence to the contrary that is cited in §8.4; and *complains* that I’ve done nothing more than illustrate that “the accepted empirical characterization of primary linguistic data *might* turn out to be radically wrong.” (p.8)

Clearly, at least part of what’s going on here is a battle over who gets to hold the hot potato – whose is the burden of evidence and argument in this discussion? I say that it’s the Chomksyan’s, since he’s the one making very specific empirical claims – apparently backed up by nothing other than his intuitions -- about what forms are and are not available to children learning language. Matthews says it’s mine, even though I’m not advancing any concrete theory of language acquisition, because I’m the one with the temerity to mention that there appears to be a problem with the Chomskyan’s claims about the *pld*, to own up to differing intuitions, and to cite actual empirical evidence against them.¹²

Since I don’t know how to settle this kind of dispute – except by writing books like *What’s Within* (or, perhaps, stamping my feet) – and since I’m finding it almost irresistible at this point to start talking about Creation Science again, I’ll stop. Thanks to Matthews and Antony for their Critical Notices, and thanks to *Mind and Language* for publishing this symposium. It’s been, as we say here in California, a trip.

¹² E.g., one of my 18 month-old daughter’s favorite games is peekaboo. She puts a teatowel over her head and my husband says: “Who is the girl who’s wearing a teatowel on her head?” Katie responds, of course, by pulling the teatowel off her head, saying “It’s Katie!” and we all shout “Peekaboo.” Of course, all that this anecdote really reveals is that we must be a bizarre family. For note that ‘Who is the girl who’s wearing a teatowel on her head?’ is a sentence of exactly the kind that Chomsky claims is “unlikely” to occur in the *pld*.

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